

THE SYSTEMATIC STATUS OF THE FAMILY THAUMASTOCORIDAE
WITH THE DESCRIPTION OF A NEW SPECIES OF *DISCOCORIS*
FROM VENEZUELA (HEMIPTERA: HETEROPTERA)¹

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Abstract.—The systematic relationships of the Thaumastocoridae are discussed. The Xylastodoridinae, which has recently been elevated to family status, is returned to its former position as a subfamily of Thaumastocoridae. *Discocoris fernandezii* is described as a new species from Venezuela. A key to the four species of *Discocoris* is included.

Drake and Slater (1957) in their revision of the family Thaumastocoridae recognized that two very distinct subfamilies were represented, the Thaumastocorinae restricted largely to Australia (a single species in south India) and the Xylastodoridinae (as Xylastodorinae)² represented by one species of *Xylastodoris* in Cuba and Florida and one species of *Discocoris* in South America. Subsequently several additional species have been described including two in the Xylastodoridinae (*Discocoris drakei* Slater and Ashlock (1959), and *D. kormilevi* Viana and Carpintero). Viana and Carpintero (1981) proposed that the Xylastodoridinae be elevated to family status as the Xylastodorididae. The stated reasons for this action were the differences in the genitalia, the differences in host plants and the different distributions.

We believe that elevation of the Xylastodoridinae to family rank is unwarranted and will only serve to obscure relationships, both morphological and zoogeographic, rather than to clarify them.

Most importantly, despite important morphological differences between the two subfamilies, the Thaumastocoridae seem to unquestionably form a monophyletic group held together by several important synapomorphies such as the asymmetrical pygophore in which the phallus rides with accompanying modification of the adjacent abdominal segments, loss of the ovipositor, shortening and broadening of the first labial segment, etc.

The geographic separation emphasized by Viana and Carpintero (1981) seems to favor rather than oppose retention of the two groups as subfamilies. A distri-

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² According to G. C. Steyskal, Systematic Entomology Laboratory, USDA, the word *doris* could be from either of two different Greek words, both of which are feminine and have the stem *dorid-*; therefore, the family-group name based on *Xylastodoris* should be Xylastodoridinae.

bution that is essentially Australian-Neotropical occurs in many plant and animal groups (i.e., Marsupalia, *Nothofagus*, Peloridiidae, Idiostolidae, and Udeocorini). Such distributions suggest relationships that go back at least to 45 million years before present when a distributional pathway lay open between Australia and South America through Antarctica.

The differences between the two subfamilies are chiefly the loss of parameres in the Xylastodorinae. This merely expresses a condition further derived than that found in the Thaumastocorinae where only one paramere is lost. Viana and Carpintero may have been influenced by Drake and Slater's (1957) statement that neither arolia (= parempodia) nor pseudarolia (= pulvilli) are present in the Thaumastocorinae but that both are present in the Xylastodorinae. However, Schuh (1976) notes that while the Thaumastocorinae lack pulvilli they do have small setiform parempodia similar to those found in the Xylastodorinae.

The elevation of the Xylastodorinae to family status thus appears to be only splitting of a monophyletic taxon and not a modification of the relationships of the two groups to one another or to any other hemipterous taxon. Such actions have the disadvantage of disrupting stability without enhancing an understanding of relationships. In this case it has the disadvantage of obscuring zoogeographic as well as morphological relationships. Therefore we return the Xylastodorinae to subfamily status as one of the two subfamilies of Thaumastocoridae.

All of the Western Hemisphere species of Thaumastocoridae apparently breed only on palms (Palmaceae): *Xylastodoris luteolus* Barber on the Royal Palm *Roy-stonea regia* (Baranowski, 1958), *D. drakei* on "yarina palm" *Phytelephas* sp. (Schuh, 1975), *Discocoris kormilevi* on "Yatay, Enana" (*Butia yatay poni*) (Viana and Carpintero, 1981) and *D. vianai* Kormilev on *Euterpe edulis* (Kormilev, 1955). The new species of *Discocoris* described below probably also will prove to breed on palms although the host plant is as yet unknown.

All measurements in the description below are in millimeters.

Discocoris fernandezii Slater and Brailovsky, NEW SPECIES

Description.—Broadly ovate. Nearly uniformly light testaceous. Humeral angles of pronotum, a diffuse ray on posterior lobe of pronotum on either side of midline and antero-lateral angles of scutellum brown. Eyes bright red. Dorsal surface of pronotum and scutellum strongly and conspicuously punctate. Hemelytra with corium bearing relatively small, shallow, inconspicuous punctures; those on clavus large, forming 3 rows. Dorsal surface nearly glabrous. Ventral surface clothed with short, decumbent, silvery hairs.

Head broad, nondeclivent. Juga strongly arcuate; juga and tylus extending forward an equal distance, the latter not tapering anteriorly. An acute, inwardly curving spine present at anterior angle of each eye, extending only $\frac{1}{2}$ way to distal end of 1st antennal segments. Ocelli located exactly at level of posterior margins of compound eyes. Length head 0.52 (4); width 0.76; interocular space 0.48. Pronotum with anterior margin moderately concave; antero-lateral angles produced forward to posterior margins of eyes; lateral margins broadly explanate, slightly arcuate with a few small teeth present. Posterior margin of pronotum sinuate adjacent to scutellum, laterally curving slightly antero-laterad to humeri; humeral angles conspicuously tumid and elevated. Length pronotum at midline 0.58; maximum length 0.70; maximum width 1.32. Scutellum somewhat laevigate with a

faint median elevation. Distance between scutellar punctures much less than diameter of a puncture. Scutellum length 0.74, width 0.66.

Hemelytra symmetrical. Corium moderately convex; lateral margins strongly explanate and broadly arcuate. Membrane considerably exceeding apex of abdomen. Length claval commissure 0.20. Midline distance apex clavus—apex hemelytron 1.08. Labium extending well onto abdominal sternum three. Length labial segments I 0.26, II 0.26, III 0.50, IV 0.62. Length antennal segments I 0.08, II 0.14, III–IV missing. Total body length 2.84.

Holotype.—♂. VENEZUELA: Aragua, Rancho Grande, 1100 m, 1.IV.1966 (J. & B. Bechyne leg.). In Universidad Central de Venezuela collection.

Paratype.—♂. VENEZUELA: Roraima, Bolivar Gran Sabana. 1800 m, 22.X.1966 (J. & B. Bechyne and E. Osuna). In J. A. Slater collection.

Remarks.—*Discocoris fernandezi* may readily be separated from the previously described species of *Discocoris* by the characters given in the following key. It appears to be most closely related in most structural characteristics to *D. vianai* but the large coarse punctures readily distinguish it. Both *vianai* and *drakei* are relatively finely punctate. *Discocoris kormilevi* has a rather coarsely punctate dorsal surface. It is unique, however, in having extremely large flaring lateral pronotal expansions that project far forward of the eyes to reach the level of the middle of the tylus. The ocelli in *kormilevi* are placed considerably behind the posterior margins of the compound eyes in contrast to the other species where the ocelli are located on a level with the posterior eye margins.

This species is named for Dr. Francisco Fernandez-Yepey of the Universidad Central de Venezuela in recognition of his many contributions to the entomology of Venezuela.

KEY TO SPECIES OF *DISCOCORIS*

1. Pronotum with antero-lateral projections extending much forward of anterior margins of eyes (Viana and Carpintero, 1981: figs. 3, 11, 12, 21) *kormilevi* Viana and Carpintero
- Antero-lateral pronotal projections not extending anterior to eyes 2
2. Tylus strongly tapered anteriorly to a subacute apex; hemelytra strikingly asymmetrical (Slater and Ashlock, 1959: fig. 1; Viana and Carpintero, 1981: fig. 2) *drakei* Slater and Ashlock
- Tylus not strongly tapering anteriorly, of nearly uniform width throughout; hemelytra symmetrical 3
3. Pronotal and scutellar punctures fine and shallow, distance between those (centrally) on scutellum and posterior pronotal lobe as great as or greater than diameter of puncture; lateral flanges of pronotum impunctate or nearly so adjacent to margins; spine on head anterior to each eye reaching distal end of 1st antennal segment (Slater and Ashlock, 1959: fig. 2; Viana and Carpintero, 1981: figs. 1, 20) *vianai* Kormilev
- Pronotal and scutellar punctures coarse, large and deep, those mesally on scutellum and posterior portion of pronotum much greater in diameter than distance between them; lateral flanges of pronotum with conspicuous punctures almost to margins; head spine anterior to each eye extending only to middle of 1st antennal segment *fernandezi*, new species

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